

### ABSTRACT

A base station transmits a first spread spectrum signal having a first code. It receives and analyzes an impulse response of multipath components of a second spread spectrum signal having a second code to determine a first received component. The second signal is time synchronized with the first spread spectrum signal. A distance determination is made based on in part a timing difference between the second code of the received second signal and the first code of the base station's transmitted first signal and the determined first received components for that base station's received second signal.